MULTI DIGITAL SCROLL UNITS

MODEL:	MDS080-MDS300B(R)
COOLING CAPACITY:	24.5KW-80KW
HEATING CAPACITY:	26KW-85KW

McQuay® Air Conditioning

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Note: Installation and maintenance are to be performed only by qualified personal who are familiar with local codes and regulations, and experienced with this type of equipment.

Caution: Sharp edges and coil surfaces are a potential injury hazard. Avoid contact with them.

Warning: Moving machinery and electrical power hazards. May cause severe personal injury or death. Disconnect and lock off power before servicing equipment.

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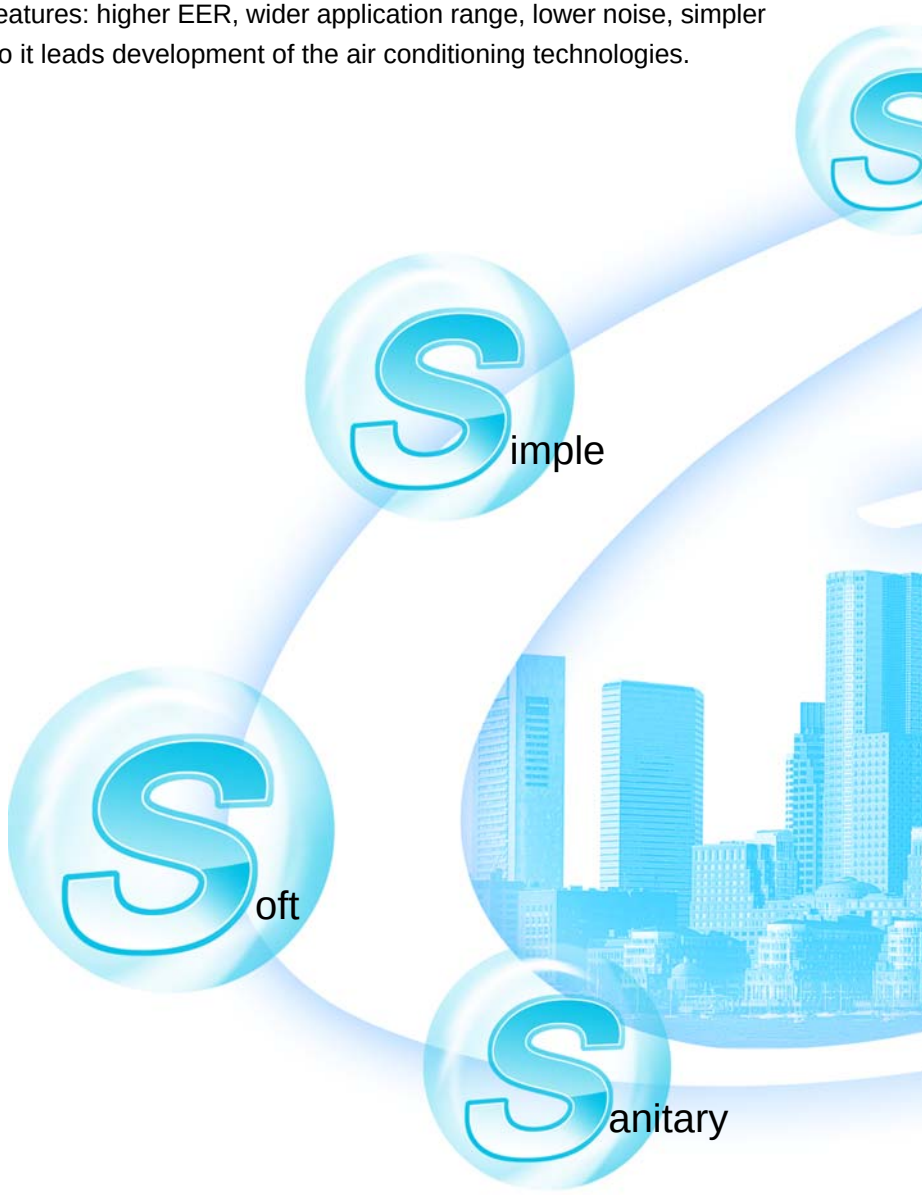
Powered by State-of-the-Art Technology

- McQuay Multi Digital Scroll Air Conditioner

MDS II (Multi Digital Scroll) system is a new-generation air conditioning system developed on the basis of MDS I to meet customers' needs in the commercial central air conditioning field. In addition to the numerous advantages of MDS I, it has the following features: higher EER, wider application range, lower noise, simpler installation, easier system management, so it leads development of the air conditioning technologies.



Strong

ave Energy

Silence

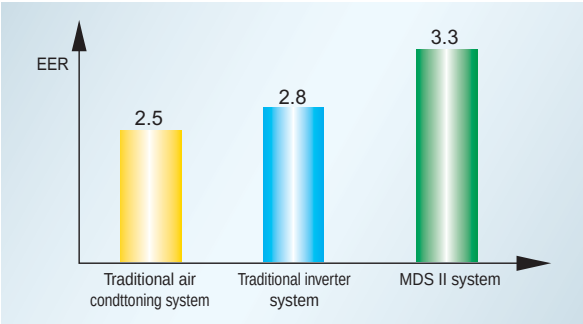
Indoor Units Group

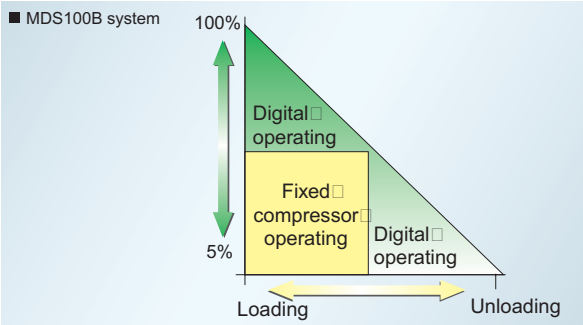
Model \ Capacity range		0.8HP	1.0HP	1.5HP	1.8HP	2.0HP	2.5HP	3.0HP	4.0HP	5.0HP	6.0HP	8.0HP	10.0HP
Ceiling concealed units MCC		○	○	○	○	○	○	○	○	○	○		
Ceiling cassette units MCK			○	○	○	○	○	○	○	○			
High static pressure duct units MDB										○	○		
Ceiling exposed / floor standing indoor units MCM						○		○		○			
Wall mounted indoor units MWM		○	○	○		○	○						
Fresh air units MDBX										○		○	○

MDS II is a new product built on MDS I. With a better design and new technologies, it fits into a wider range of applications, marking a revolutionary step in the history of air conditioning development.

1. Higher EER

A new cooling circuit design makes the unit more efficient, increasing its ERR from 3.0 to 3.3 (standard cooling condition at full load), and lowering the power consumption by 10%.





2. Easier Installation

With a truly modular form factor, the units can be installed closely side by side. As all the units are of the same depth and height, the side-by-side installation can save more space.

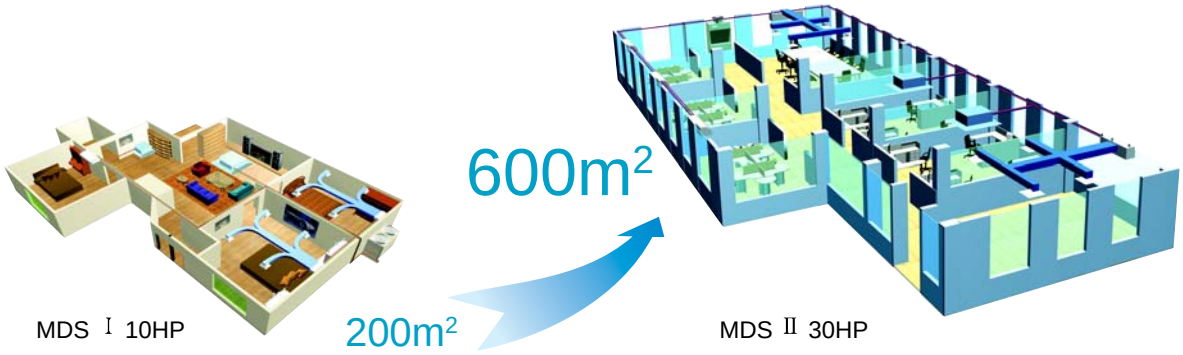
34%

All the MDS II units are of the same depth and height.

Take the installation of three 10HP units for example. The installation space is reduced by 34%, from previously 16.16 square meters to 10.68 square meters now.

3. Larger Capacity

The maximum cooling capacity of a standard unit rises from 10 HP to 30 HP. The coverage of a single unit increases from 200m² to 600m². With a combination of modules, the units can be used even more widely.



4. Quieter Running

The outdoor unit has new-type spiral fan blades. The smooth air absorbing structure reduces the turbulent flow and noise signiflcantly. The outdoor unit provides innovative quiet sleep mode (cooling). Unique sound insulation compressor design makes the system much quieter.

New-type spiral fan blade

V-shaped heat exchanger

sound insulation compressor

5. Easier Management

McQuay network monitor and manager enable you to manage equipment through the network. McQuay offers a wide variety of system products, including centralized controller, network controller, centralized monitor and user-specific biller. These products can form a mini-type control loop to connect the BMS or a network management system via telephone lines.

Centralizedcontrol software

User-specific biller

Strong

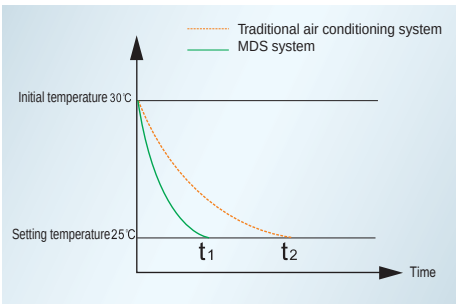
MDS II system can bring you more fresh and comfortable life by means of superior cooling & heating performances, stepless capacity modulation and high accuracy of temperature control.

Superior Cooling and Heating Performance

MDS system adopts advantaged design and passes rigorous test to ensure superior performance. From -15°C to 48°C, MDS system can run in a very good condition, which will make you comfortable.

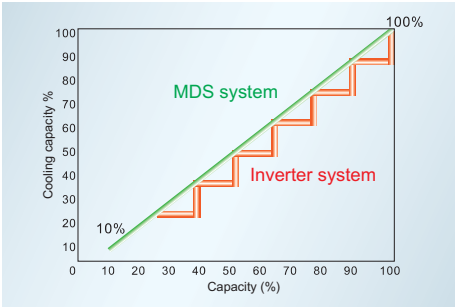
Reaching the Setting Temperature Quickly

Both the direct heat exchange between the refrigeration system and the air, and the intelligent temperature control ensure that the indoor temperature can reach the setting temperature quickly. Meanwhile, the low temperature fluctuation makes you much more comfortable.



Wide Range of Capacity Modulation

MDS system has a stepless capacity modulation from 10% to 100%. The output capacity can be closely matched to the actual demanded capacity. Compared with the traditional inverter, the MDS has the advantages of high SEER, wide capacity modulation and more energy saving.



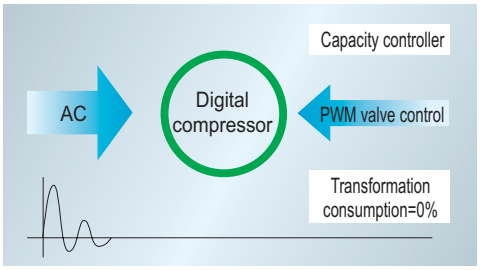
Save Energy

MDS system is designed with the most advantaged digital variable compressors, which is much energy saving. It can save you a lot of money.

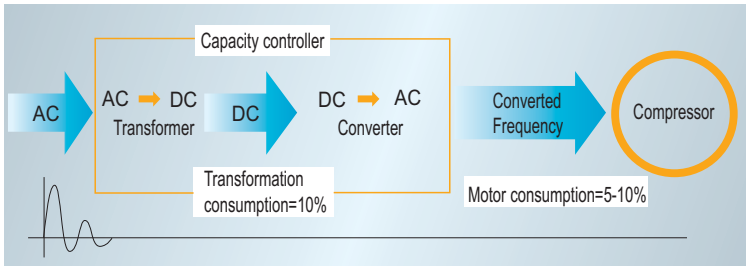
High SEER (Seasonal EER)

With a state-of-the-art cooling circuit design, MDS II provides a higher EER but consumes less energy than a traditional air conditioning system.In most time of a year, the air conditioning system is running in part load condition, which wastes a lot ofenergy. Whether the units are energy saving or not is depended on the SEER. MDS system has high SEER,so it can run in high EER both in full load condition and part load condition.

- MDS is digitally stepless modulated and has a wide range of capacity modulation.
- The start & stop times reduce, the start current is low.
- The transformation consumption of MDS is 15%-20% lower than that of inverter when the units modulate the capacity.
- The min. power consumption is only 10% of max. power consumption.
- There is no power consumption of inverter.
- The unit is free from bypass loss at light load, unlike a traditional inverter system.



MDS system



Traditional inverter system

Save More Power and Money

MDS system features high SEER, which will save you a lot of money every year. Compared with the traditional air conditioning system, MDS system can save 40% electricity charge.

Electricity charge for a traditional central air

Electricity charge for MDS II system

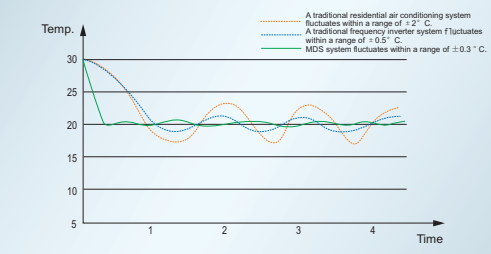
Soft

MDS system is the perfect combination of advantaged air handling technology, accurate temperature control and reliable intelligent multi-scroll technology, which will make you more comfortable.

Accurate Temperature Control, Quick Response

The indoor load depends on several factors, such as ambient temperature and sunshine. In order to keep you more comfortable, the air conditioning system should be stepless modulated quickly to keep the indoor temperature in a low fluctuation range. MDS system can fulfill the function of stepless capacity modulation and output different capacities instantly. MDS is the future of the air conditioning system.

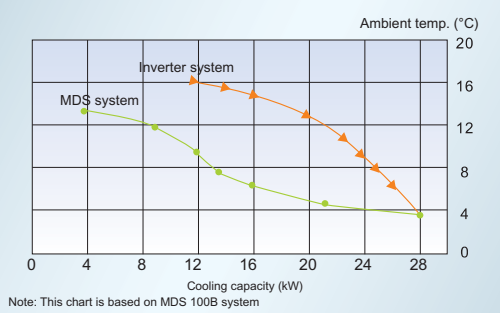
- The accuracy of indoor temperature is 0.3ºC.
- The unique dynamic forecast technology of load demanded.
- The continuous tracking technology of load.
- Quick response. The output can be changed from 10% to 100% very quickly.
- Quick action. The electronic expansion valve enables the system to provide more accurate temperature control and give more punctual response.



Excellent Dehumidifying Performance

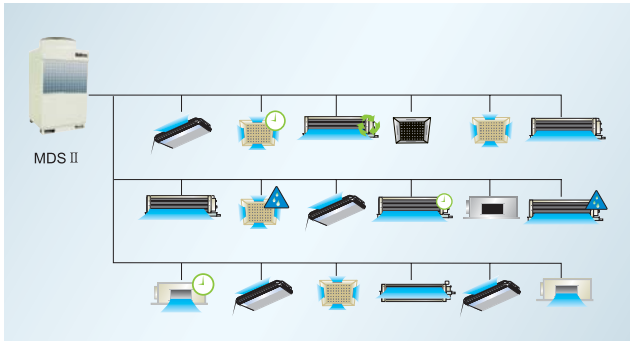
The indoor relative humidity is very high in summer, which gives a bad effect on staying indoor. MDS system has excellent dehumidifying performance, which can reduce the indoor relative humidity, thus you can live in a very comfortable environment.

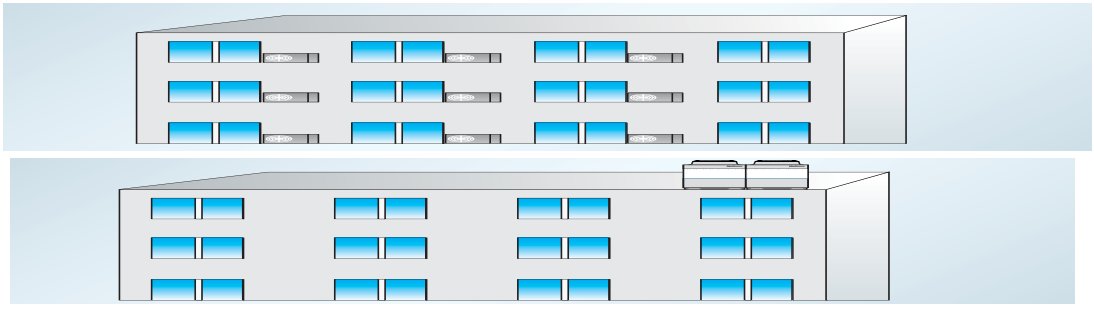
MDS system works at a lower sensible heat rate. It has a suction pressure lower than a inverter system and therefore provides more powerful dehumidification.



Advantaged Variable Technology

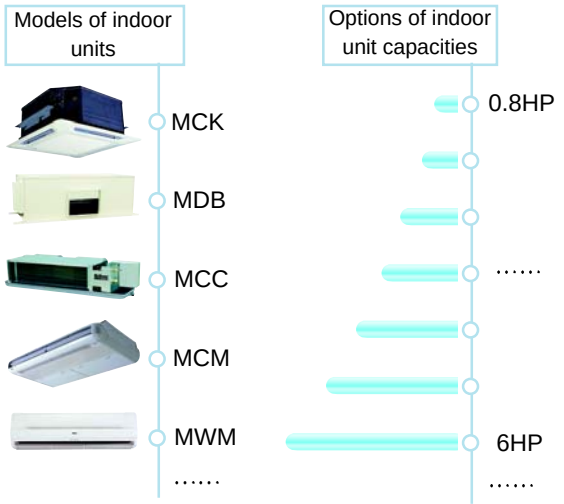
MDS system adopts the “stepless capacity modulation”technology to make sure that one outdoor unit canconnect up to 48 indoor units. Compared with the traditional split conditioner, MDS system reduces the quantity of outdoor units, which makes the building more elegant.





Various Types for Option

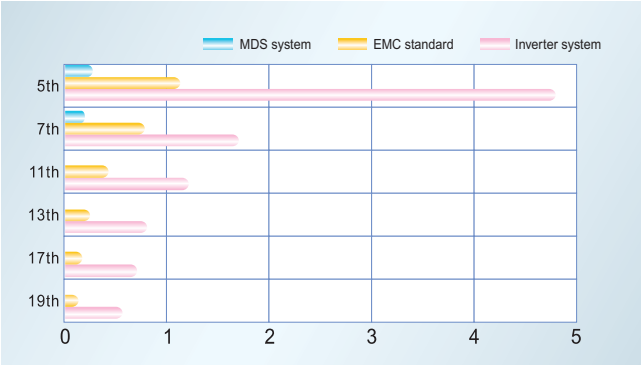
- The indoor units can be selected based on the customer’s requirement, which makes the house more splendid.
- Central air conditioning supply air grille is adopted to improve the indoor decoration’s level.
- The indoor unit’s range is from 0.8HP to 6HP, which gives the customer more options.



Soft

Excellent Electromagnetic Compatibility

For MDS system, the Digital Scroll motor runs at a constant speed throughout the operating range, unlike the variable speed compressor technology. Due to this design, there is negligible electromagnetic interference. This unique feature eliminates the need for expensive electromagnetic suppression electronics required to ensure electromagnetic compatibility.



EMC comparison

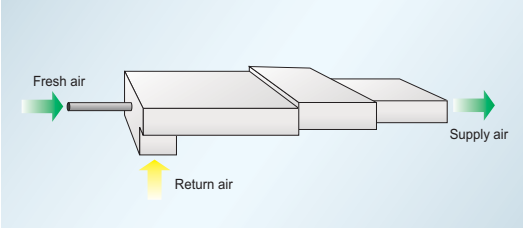
For the inverter system, when it modulates the capacity, it will generate electromagnetic interference, whichhas a bad effect on the electronic device. In order to meet the EMC standard, the inverter system user needs to pay for expensive electromagnetic suppression, which costs the user much more money.

Sanitary

MDS system adopts advantaged technology to prevent any penetration of fungi or bacteria into the system, to improve the indoor air quality, which can give you a healthy and comfortable living environment.

Fresh Air Introduction

Every unit has the function of introducing the fresh air into the indoor to improve the indoor air quality. HRB fresh air heat recovery unit is optional for fresh air introduction and energy saving.



Note: The connection above is only to give a demonstration. Please refer to the manual for the connection of MCK unit.

Bacteria Restraint

According to the scientic research, the higher the humidity, the air is more prone to bacteria.
Compared to existing modulation technology, MDS has excellent dehumidifying performance, because it operates at lower evaporating temperatures, which can prevent the generation of bacteria.

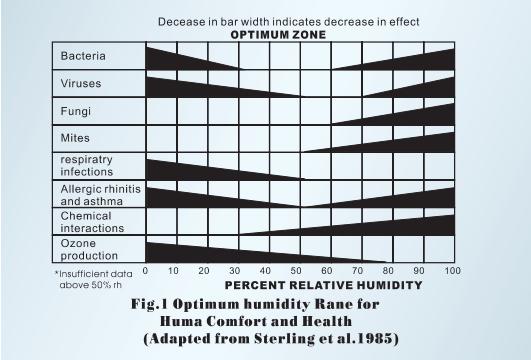
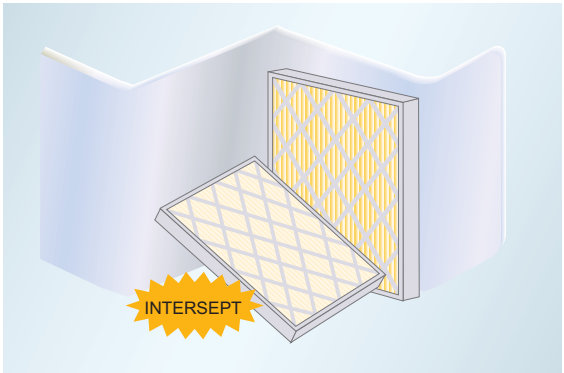


Fig.1 Optimum humidity Rane for Huma Comfort and Health (Adapted from Sterling et al.1985)

Moldproof and Antibacterial

- Ceiling concealed unit can adopts the AAF filter, which includes INTESEPT antimicrobial. It can prevent the bacteria and improve the indoor air quality.
- The optional ultraviolet sterilization lamp can kill bacteria and zyme effectively. (Applicable to MCC/MDB units only)



Silence

MDS system adopts the advanced compressors to reduce the noise level.

- The outdoor unit has new-type spiral fan blades. The smooth air absorbing structure reduces the turbulent flow and noise significantly. A unique sound insulation compressor design makes the system much quieter.

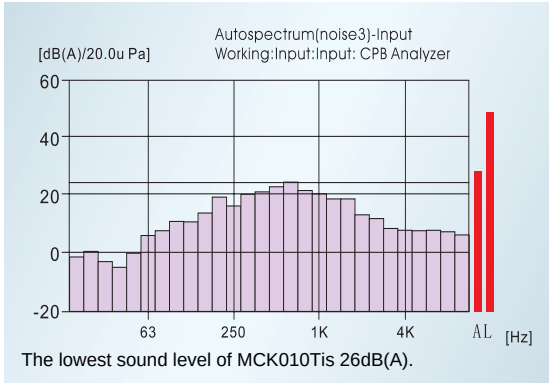
New-type spiral fan blade

V-shaped heat exchanger

sound insulation compressor

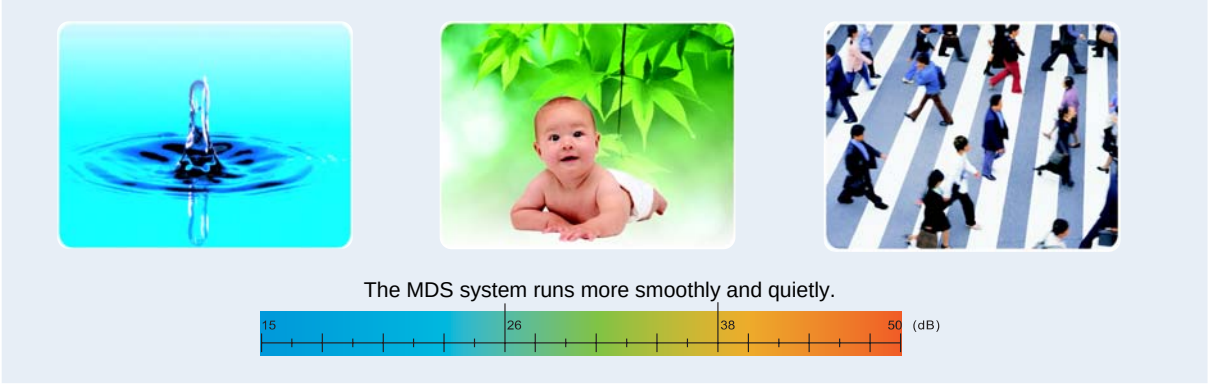
- Based on our national-level precise sound test room and noise spectrum analyzer, we compare, select and improve the components like fans and motors. We also apply a professional noise reduction design to their structure and pipes, significantly reducing the unit noise.

National-level precise sound test room



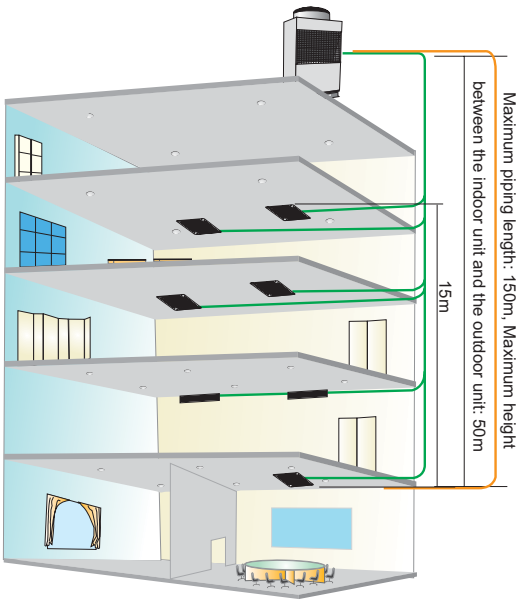
Noise spectrum analyzer

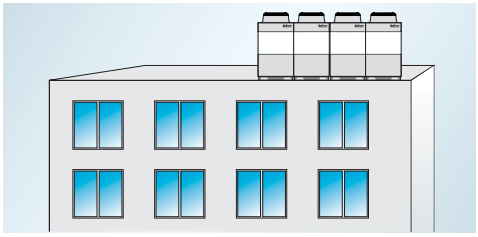
- The outdoor unit provides innovative quiet sleep mode (cooling). It can adjust the fan speed automatically according to the outdoor temperatures, so the unit can run more quietly and save more energy.

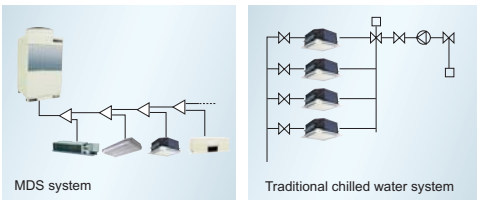


Simple

The MDS system are simple and reliable, the design and installation are more flexible.







Unique Installation

The outdoor unit of MDS system is designed as package, the compact structure occupies less space and is easy to move. The outlines and dimensions of the innovated units are compact.They can be installed side by side to save space.

Long Piping Design

MDS system is designed to a capacity modulation system without oil circle. Piping length between outdoor unit and indoor unit can be extended up to 150 meters. The height between outdoor unit and indoor unit can be extended up to 50 meters when the outdoor unit is above the indoor unit. (If the outdoor unit is below the indoor unit, the height between them can be up to 40 meters.) The height between different indoor units can be extended up to 15 meters, which enables a single system to cover four or five floors.

Uniform Location Design

The outdoor units can be located on the rooftop, which saves space and is convenient for installation. The depth and height of all the units are the same. When they are located together, they look elegant.

Simple Piping Connection

Only the refrigerant pipe is needed for MDS system, which can save you a lot of money because there is no chilled water piping and other accessories.

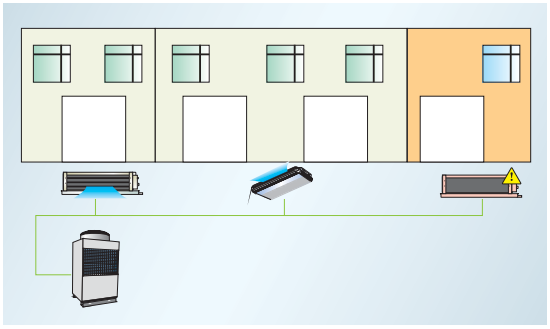
Providing Refnet Joint

The refnet joint is provided by the factory in accordance with different indoor units, which will reduce the work force at site and save you a lot of money.

Simple

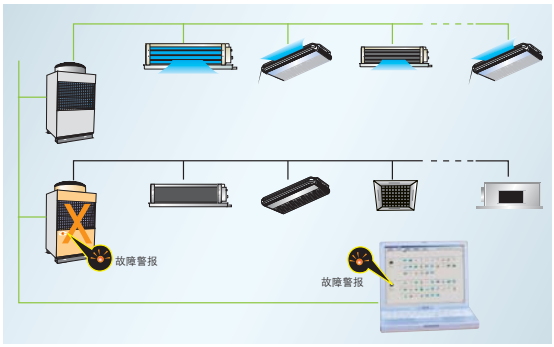
Simple Maintenance

Even if the MDS system has some malfunctions, the maintenance is very easy. Because the control devices are simple and only a few devices need maintenance. When there are some malfunctions in one zone, they do not affect the operation in other zones.



Malfunction Auto-diagnosis and Alarm

MDS system provides the unique function of malfunction auto-diagnosis and alarm, which can make sure that the units can run more reliably.



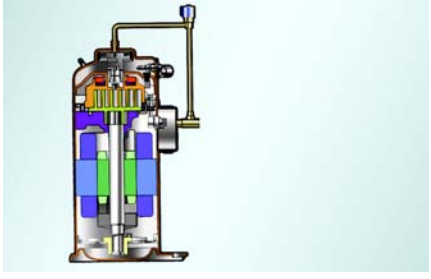
Reliable

MDS system adopts the advantaged capacity modulation technology to reduce the control devices, which reduce the malfunction odds mostly.

- MDS system has excellent oil return performance even at low capacities, which will make sure that all of the removable parts of the compressor can be lubricated and cooled down. Thus, the compressor remains reliable throughout operation.
- It reduces the start/stop times, which will reduce the attack to the electricity supply net.
- The PWM (Pulse Width Modulation) valve has the longevity of 40 million times.
- The design is simple and there is no requirement for bypass valve.

The comparison between MDS system and inverter system

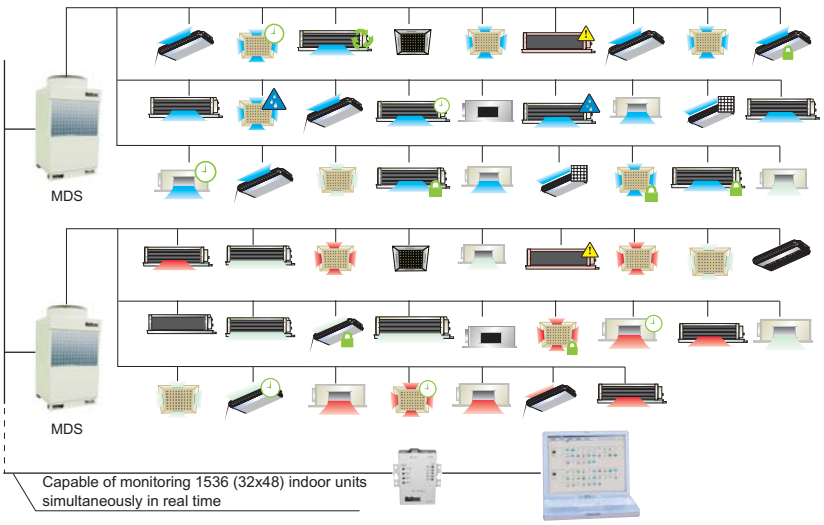
	Inverter system	MDS system
Microprocessor	Multi	Single
Solenoid	Multi	Single
Gas bypass system	Required	Not required
Liquid bypass system	Required	Not required
Electromagnetic suppression	Required	Not required



Simple

Central Control

MDS system can be connected up to 48 indoor units. 32 outdoor units can be controlled in a network through a centralized controller. The monitor software can monitor 1536 (32x48) indoor units in real time at the same time. The communication cables between indoor units and outdoor units are very easy to arrange. MDS system has a strong function of displaying the malfunction, which can save maintenance time and cost.



MDS system real time control interface

Reliable

MDS system adopts the advantaged capacity modulation technology to reduce the control devices, which reduce the malfunction odds mostly.

- MDS system has excellent oil return performance even at low capacities, which will make sure that all of the removable parts of the compressor can be lubricated and cooled down. Thus, the compressor remains reliable throughout operation.
- It reduces the start/stop times, which will reduce the attack to the electricity supply net.
- The PWM (Pulse Width Modulation) valve has the longevity of 40 million times.
- The design is simple and there is no requirement for bypass valve.

Wired control + Remote control (Optional)

Remote control

Central control

McQuay Software Management System

Real-time Monitor

System monitor software: Powerful MDS real-time monitor software can implement indoor control, system control, circuit control and service control. It helps users or serving personnel to view detailed parameters and unit data.

Description of main control functions:

Indoor Monitoring

- Set the mode, fan speed, auxiliary setting, and temperature of indoor units. Switch on/off indoor units.(You can operate several units or several machines in several units at the same time.)
- Set indoor units and outdoor units in groups. You can customize the group settings. (The default groups are by outdoor units.)
- Display alarms and check alarms. (You can check malfunction of outdoor or indoor units by selecting numbers.)
- Set timing mode and set the timing mode of indoor units. (You can set and save the timing mode of the units without any limitation.)

System Monitoring

Display the types and status of all the indoor units in the system, including alarm and timing.

Description of icons of each type:

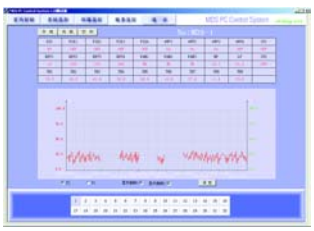
TYPE	Icon				
	Switching off	Cooling	Heating	Dehumidifying	Ventilating
MCC					
MCK					
MCM					
MDB					

Description of icons of indoor units:

Small icon			
Description	The timing function of this indoor unit is enabled	The wired controller of this indoor unit is locked. You cannot control it through the cable controller.	Faults occur to this indoor unit. Double-click this icon to view the details.

Circuit Monitoring*

Select and view the system diagram, running parameters of outdoor units, and running parameters of all the indoor units.



Service Monitoring*

The current running parameters and the curves of history records of outdoor and indoor units can be displayed.

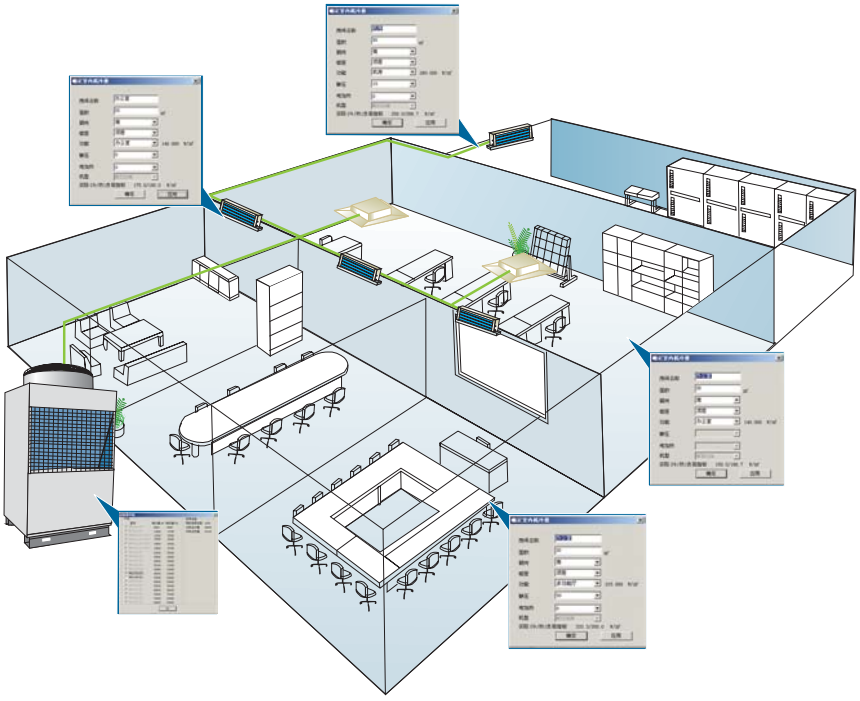
Note: * Only authorized maintenance personnel can use this window.

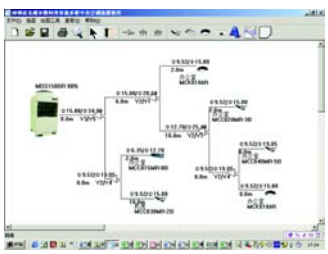
User-specific Biller

With a precise flow control technology, the user-specific biller built on the real-time monitor enables you to measure the quantity of electric charge more reasonably. The biller also allows you to group up to 1536 indoor units as you desire, to calculate the electricity charge accurately in real time. It brings you great fiexibility, making it easier for you to change the grouped devices and collect statistics. This software is also capable of billing electricity consumption depending on peak and bottom hours. If a user becomes delinquent, the realtime monitor allows you to locate and block this user without affecting other users, making your management easier.

Flexible and Convenient Selection Software

The selection software designed for different models allows you to select and verify unit models as required by customers, and determine the models of indoor and outdoor units as well as the required quantity of refnet joints and pipes. Thus, the selection software enables you to carry out complex unit design and selection more easily and quickly with a single click.





Ceiling Concealed Indoor Units MCC Series

Features

Central air conditioning miniaturization, slim body, concealed type, spacing saving. ESP is optional, intelligent control and low noise.

Specifications

Model			MCC 008T	MCC 010T	MCC 015T	MCC 018T	MCC 020T	MCC 025T	MCC 030T	MCC 040T	MCC 050T	MCC 060T
Cooling capacity		W	2000	2500	3650	4500	5600	6500	7800	10600	12400	14400
Heating capacity		W	2200	2600	3700	4700	6100	7400	8900	11600	14500	17300
Rated power input		W	47	47	81	82	82	123	158	276	276	280
Power supply			220V ~ /50Hz									
Air flow	High	m^3/h	450	450	580	800	800	960	1200	1900	1900	2100
	Medium	m^3/h	370	370	470	650	650	780	950	1520	1520	1750
	Low	m^3/h	280	280	380	540	540	600	800	1300	1300	1460
ESP(Options)		Pa	15(0/30/50)						30(15/50/70)	50(15/30/70)		
Dimension		mm	1030x469x220			1290x490x250				1640x490x250		1900x490x250
Weight		kg	22	22	22	25	25	27	28	39	39	45
Sound(High/medium/Low)		dB(A)	31/29/27	31/29/27	34/32/30	35/32/29	35/32/29	37/36/35	42/40/38	47/45/43	47/45/43	48/46/44
Piping size	Liquid pipe outside diameter Φ	mm(in)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)	9.52 (3/8)	9.52 (3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas pipe outside diameter Φ	mm(in)	9.52 (3/8)	9.52 (3/8)	12.7 (1/2)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	19.05(3/4)	19.05(3/4)	19.05(3/4)
	Drain pipe	inch	R3/4									

Notes:

- Cooling capacity is based on 27/19°C (DB/WB) indoor air temperature, 35/24°C (DB/WB) outdoor air temperature.
- Heating capacity is based on 20/15°C (DB/WB) indoor air temperature, 7/6°C outdoor air temperature.
- The heat pump indoor units are the same as the cooling only indoor units.
- The ESP values in bracket are optional, and optional ESP can be easily reached on field.
- Sound values are obtained before delivery. They may differ in practice due to environmental sound or other reasons.

Ceiling Cassette Indoor Units MCK Series

Features

Elegant outlook, 4 way air supply, washable and build-in high efficiency filter, fresh air introduction, microcomputer control, smooth drain and low noise.

Specifications

Model		Indoor Unit	MCK010T	MCK015T	MCK018T	MCK020T	MCK025T	MCK030T	MCK040T	MCK050T
Cooling capacity		W	2800	3600	4500	5400	6500	7500	10000	12500
Heating capacity		W	3200	3900	5000	5900	7200	8000	11000	13500
Rated power input		W	26	34	36	42	75	84	110	140
Power supply			220V ~ /50Hz							
Air flow	High	m^3/h	520	600	650	700	1200	1300	1360	1650
	Medium	m^3/h	430	520	550	600	1100	1060	1200	1450
	Low	m^3/h	380	430	400	530	960	850	1110	1350
Dimension		mm	930X930X278				930X930X363			
Weight		kg	26		30		39.5		39.5	
Sound(High/medium/Low)		dB(A)	29/28/26	32/30/27	38/34/30	39/35/31	42/40/38	45/43/41	46/44/42	48/45/42
Piping size	Liquid pipe outside diameter Φ	mm(in)	6.35(1/4)		9.52(3/8)				9.52(3/8)	
	Gas pipe outside diameter Φ	mm(in)	9.52(3/8)	12.7(1/2)	15.8(5/8)				19.05(3/4)	
	Drain pipe	mm	ϕ 20.5							

Notes:

- Cooling capacity is based on 27/19°C (DB/WB) indoor air temperature, 35/24°C (DB/WB) outdoor air temperature.
- Heating capacity is based on 20/15°C (DB/WB) indoor air temperature, 7/6°C outdoor air temperature.
- The heat pump indoor units are the same as the cooling only indoor units.
- Sound values are obtained before delivery. They may differ in practice due to environmental sound or other reasons.

High Static Pressure Duct Units MDB Series

Features

Installed above ceiling with supply air duct. Meet long distance air supply.

Specifications

Model		Indoor Unit	MDB050T	MDB060T
Cooling capacity		W	12500	14000
Heating capacity		W	14000	16500
Rated power input		W	615	789
Power supply			220V ~ /50Hz	
Air flow(High/Medium/Low)		m^3/h	2550/2040/1650	3000/2540/1920
ESP		Pa	100	100
Dimension		mm	1230x910x350	1430x910x350
Weight		kg	69	75
Sound Level(High/Medium/Low)		dB(A)	58/55/52	60/56/53
Piping Size	Liquid pipe outside diameter Φ	mm(in)	9.52(3/8)	9.52(3/8)
	Gas pipe outside diameter Φ	mm(in)	19.05(3/4)	19.05(3/4)
	Drain pipe	inch	R3/4	

Notes:

- Cooling capacity is based on 27/19°C (DB/WB) indoor air temperature, 35/24°C (DB/WB) outdoor air temperature.
- Heating capacity is based on 20/15°C (DB/WB) indoor air temperature, 7/6°C outdoor air temperature.
- The heat pump indoor units are the same as the cooling only indoor units.
- Sound values are obtained before delivery. They may differ in practice due to environmental sound or other reasons.

Ceiling Exposed and Floor Standing Indoor Units MCM Series

Features

Elegant design, horizontal and vertical comfortable air supply, washable air filter, convenient installation and simple maintenance.

Specifications

Model		Indoor Unit	MCM020T	MCM030T	MCM050T
Cooling capacity		W	5800	7500	12500
Heating capacity		W	5800	8000	13500
Air flow(High/Medium/Low)		m^3/h	1100/970/750	1300/1100/870	1850/1550/1200
Rated power input		W	81	116	161
Power supply			220V ~ /50Hz		
Dimension		mm	1214x670x214	1214x670x249	1714x670x249
Weight		kg	39	44	44
Sound(High/medium/Low)		dB(A)	48/45/42	50/46/43	52/48/44
PiPing Size	Liquid pipe outside diameter Φ	mm(in)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas pipe outside diameter Φ	mm(in)	15.88(5/8)	15.88(5/8)	19.05(3/4)
	Drain pipe	mm	ϕ 20.5		

Notes:

- Cooling capacity is based on 27/19°C (DB/WB) indoor air temperature, 35/24°C (DB/WB) outdoor air temperature.
- Heating capacity is based on 20/15°C (DB/WB) indoor air temperature, 7/6°C outdoor air temperature.
- The heat pump indoor units are the same as the cooling only indoor units.
- Sound values are obtained before delivery. They may differ in practice due to environmental sound or other reasons.

Wall Mounted Indoor Units MWM Series

Features

Elegant design, washable air filter, simple control and convenient maintenance.

Specifications

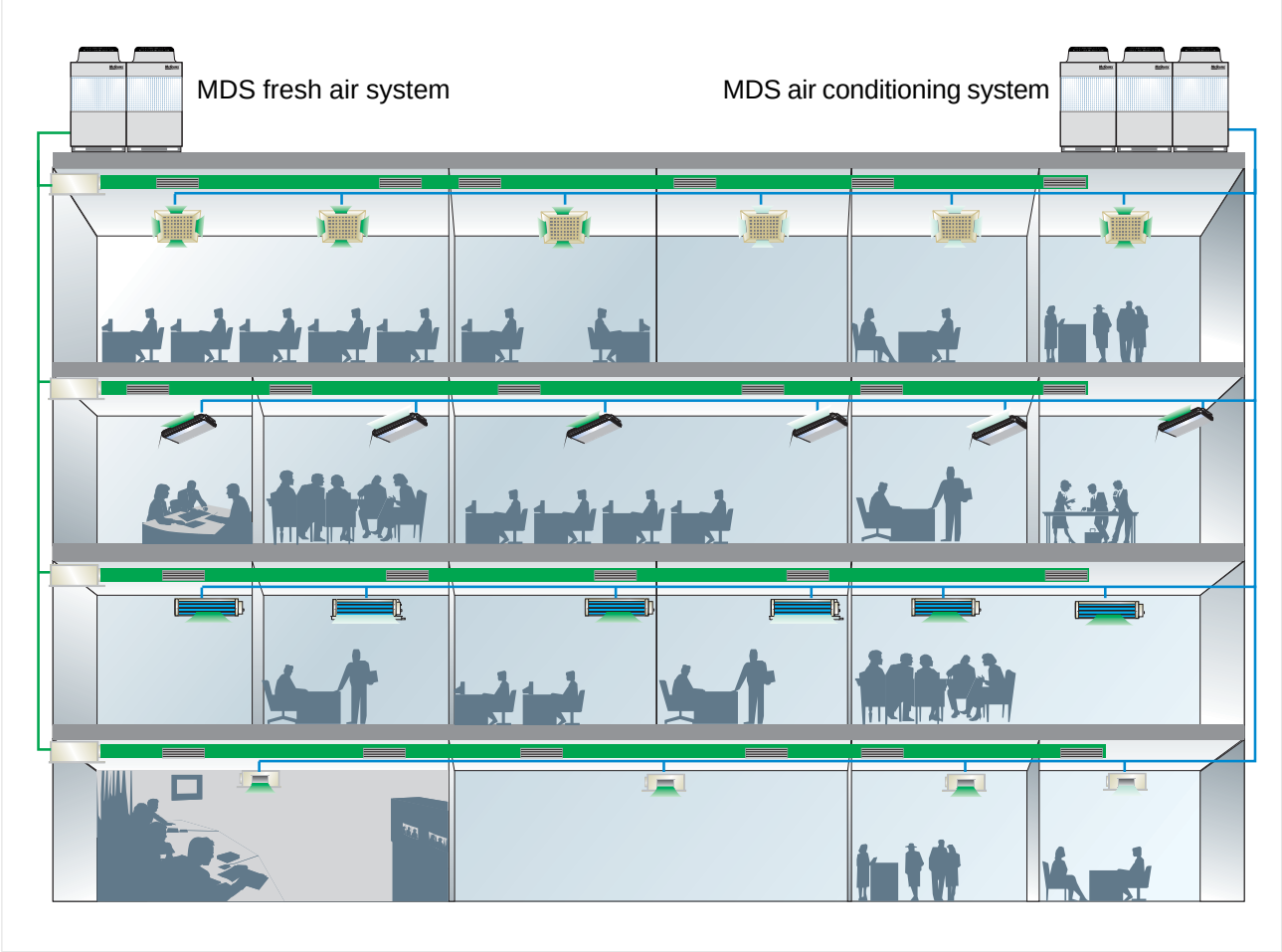
Model		Indoor Unit	MWM008T	MWM010T	MWM015T	MWM020T	MWM025T
Cooling capacity		W	2200	2780	3520	5400	6500
Heating capacity		W	2200	2780	3520	5400	6500
Air flow(High/Medium/Low)		m^3/h	460/330/270	510/420/320	590/500/370	860/720/590	1100/790/680
Rated power input		W	24	36	40	48	68
Power supply			220V~/50Hz				
Dimension		mm	799x198x260	899x198x260	899x198x260	1062x222x304	1062x222x304
Weight		kg	25	30	35	36	36
Sound(High/medium/Low)		dB(A)	39/34/28	39/34/28	42/36/29	44/40/35	49/43/40
PiPing Size	Liquid pipe outside diameter Φ	mm(in.)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)
	Gas pipe outside diameter Φ	mm(in.)	9.52(3/8)	9.52(3/8)	12.7(1/2)	15.88(5/8)	15.88(5/8)
	Drain pipe		ϕ 20.5				

Notes:

- Cooling capacity is based on 27/19°C (DB/WB) indoor air temperature, 35/24°C (DB/WB) outdoor air temperature.
- Heating capacity is based on 20/15°C (DB/WB) indoor air temperature, 7/6°C outdoor air temperature.
- The heat pump indoor units are the same as the cooling only indoor units.
- Sound values are obtained before delivery. They may differ in practice due to environmental sound or other reasons.

MDBX Fresh Air Units

MDS fresh air system provides more flexibility in fresh air handing. The independent fresh air system can treat outdoor air directly into either supply air or indoor air flow for cycle. The extra-high external static pressure can carry the fresh air as far as to each room.



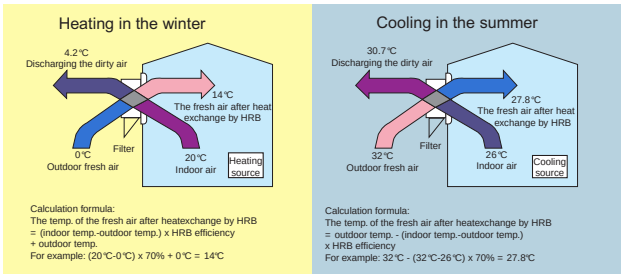
Specifications

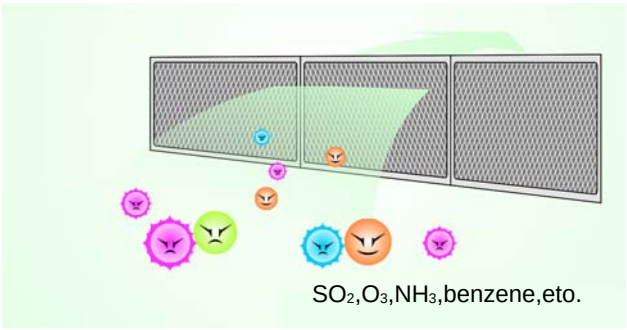
Model			MDBX050T	MDBX080T	MDBX100T	MDBX050Tx2
Cooling capacity		W	14000	24500	28000	14000x2
Heating capacity		W	8100	12900	16200	8100x2
Air flow		m³/h	1100	1700	2100	1100x2
Roted power input		W	207	417	730	207X2
ESP		Pa	105	120	150	105
Sound level		dB(A)	42	43	45	42
PiPing Size	Liquid pipe outside diameter Φ	mm(in)	9.52(3/8″)	12.7(1/2″)	12.7(1/2″)	9.52(3/8″)
	Gas pipe outside diameter Φ	mm(in)	19.05(3/4″)	28.6(1-1/8″)	28.6(1-1/8″)	19.05(3/4″)
	Drain pipe	inch	R1			
Dimensionmm			470x780x1250	470x1380x1250	470x1380x1250	470x780x1250
Outdoor unit			MDS060AR	MDS080BR	MDS100BR	MDS100BR

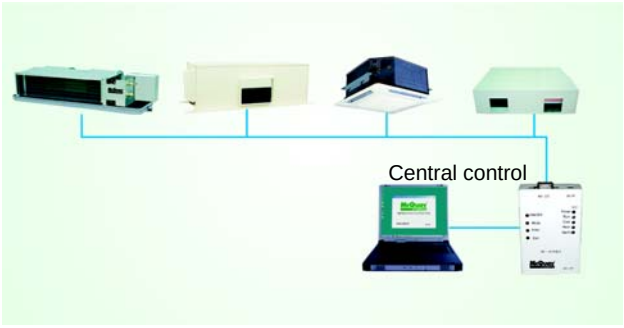
Notes:

- Cooling capacity is based on 33/28°C (DB/WB) outdoor air temperature (68%RH).
- Heating capacity is based on 0/-2.9°C (DB/WB) outdoor air temperature (50%RH).
- Sound values are obtained before delivery. They may differ in practice due to environmental sound or other reasons.
- The fresh air unit cannot share the same outdoor unit with other MDS indoor units.

HRB Heat Exchanger







The HRB heat exchanger can introduce the fresh air into a close area, which is energy saving, reducing its energy consumption by more than 60%. There are 6 units for option, including 300m³/h, 500m³/h, 800m³/h, 1000m³/h,1500m³/h, 2000m³/h.

One Unit, Two Use

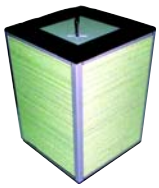
The HRB heat exchanger has the function of air exchange,when it brings the fresh air into the indoor, it also discharges the dirty air outside, which can save a lot of money.

Comfortable Manual Environment

Beside primary air filter, HRB provides active carbon filter,bactericidal lamp and humidifier, which can filtrate the dust,SO_2, O_3, NH_3, as well as benzene to improve the indoor airquality.

Flexible Control Combination

HRB can be separate control or centralized control, the out-line is similare to the air conditioner and is easy to install and maintain. It can meet the requirement of the customer: healthy and energy saving.



High Efficiency

The max. Temp. recovery efficiency of HRB is 79%, the max. Enthalpy exchange efficiency is 66%, which reduce the fresh air load of the air conditioner and save a lot of money.

- High heat exchange efficiency of 79%.
- Industry-leading moisture penetrability, strong flameretardance
- Height of body reduces 50%.
- No fresh air and return air combination, more reliable.

Model	Air flow			ESP	Power input	Enthalpy exchange efficiency			Sensible heat exchange efficiency			Dimension (LxWxH)	Weight
	High	Medium	Low			High	Medium	Low	High	Medium	Low		
	m³/h	m³/h	m³/h	Pa	W	%	%	%	%	%	%	mm	kg
HRB030A	300	212	156	70	175	52	55	64	63	66	68	1160x1138x286	79
HRB050A	500	444	335	70	287	54	54	55	63	65	69	1238x1138x324	86
HRB080A	800	640	500	90	437	58	62	65	69	71	73	1408x1264x386	108
HRB100A	1000	800	650	110	607	54	57	60	71	73	76	1708x1345x433	145
HRB150A	1500	1330	1160	150	877	54	57	59	71	74	78	1775x1345x460	163
HRB200A	2000	1600	1400	150	1368	55	57	61	71	75	79	1688x1735x600	203

Note:

The motor power input is a value in the case of high air flow and static pressure.

Outdoor Unit

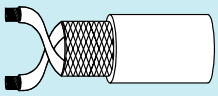
Model		MDS080B	MDS080BR	MDS100B	MDS100BR	MDS120B	MDS120BR	MDS150B	MDS150BR	MDS180B	MDS180BR	MDS200B	MDS200BR
Cooling capacity	kW	24.5	24.5	28.0	28.0	32.5	32.5	40.0	40.0	47.5	47.5	50.0	50.0
Heating capacity	kW	-	26.0	-	30.0	-	34.0	-	43.0	-	50.0	-	53.0
Power supply		380V/3N ~ /50Hz											
Sound level	dB(A)	62	62	64	64	66	66	67	67	66	66	66	66
Dimension	mm	990x840x1840						1290x840x1840		1990x840x1840			
Weight	kg	275	290	285	300	290	305	355	370	520	550	560	590
Cooling rated power input	kW	7.5	7.5	8.5	8.5	9.8	9.8	12.9	12.9	14.1	14.1	15.2	15.2
Cooling rated current	A	14.6	14.6	16.8	16.8	18.8	18.8	23.1	23.1	28.2	28.2	31.1	31.1
Heating rated power input	kW	-	7.2	-	8.3	-	9.0	-	11.1	-	13.2	-	14.7
Heating rated current	A	-	13.6	-	15.7	-	16.7	-	22.6	-	27.1	-	29.4
Refrigerant		R22											
Pipe connect type: Gas pipe		Solder, flange connection											
Pipe connect type: Liquid pipe		Flare and threaded connection											
Liquid pipe outside diameter Φ	mm(in)	12.7(1/2)				15.88(5/8)							
Gas pipe outside diameter Φ	mm(in)	28.6(1 1/8)						34.9(1 3/8)					

Model		MDS220B	MDS220BR	MDS240B	MDS240BR	MDS260B	MDS260BR	MDS280B	MDS280BR	MDS300B	MDS300BR
Cooling capacity	kW	55.0	55.0	65.0	65.0	70.0	70.0	75.0	75.0	80.0	80.0
Heating capacity	kW	-	58.0	-	68.0	-	75.0	-	80.0	-	85.0
Power supply		380V/3N ~ /50Hz									
Sound level	dB(A)	66	66	68	68	68	68	69	69	69	69
Dimension	mm	1990x840x1840				2280x840x1840		2580x840x1840			
Weight	kg	560	590	570	600	645	675	710	740	710	740
Cooling rated power input	kW	16.7	16.7	19.8	19.8	21.3	21.3	22.8	22.8	26.2	26.2
Cooling rated current	A	32.7	32.7	38.5	38.5	40.0	40.0	42.5	42.5	46.5	46.5
Heating rated power input	kW	-	16.2	-	18.5	-	20.9	-	22.0	-	23.6
Heating rated current	A	-	31.0	-	33.8	-	37.2	-	41.0	-	43.1
Refrigerant		R22									
Pipe connect type: Gas pipe		Solder, flange connection									
Pipe connect type: Liquid pipe		Flare and threaded connection									
Liquid pipe outside diameter Φ	mm(in)	19.05(3/4)				19.05(3/4)					
Gas pipe outside diameter Φ	mm(in)	38.1(1 1/2)				41.3(1 5/8)					

Notes:

- The above cooling capacity is based on 27/19°C (DB/WB) indoor air temperature, 35/24°C (DB/WB) outdoor air temperature.
- Heating capacity is based on 20/15°C (DB/WB) indoor air temperature, 7/6°C outdoor air temperature.
- Sound values are obtained before delivery. They may differ in practice due to environmental sound or other reasons.

Accessories

Type	Picture	Units	Remark
Wireless Remote controller		MCM, MCK indoor units	Standard
Wired controller		MCC, MDB indoor units	Standard
Remote controller		Working with the wired controller	Optional
Central controller		All	Optional
Refnet joint		All	Optional*
Twisted-pair		All	Optional
Central control software		All	Optional

Note:

*There are two types of refnet joint, “Y-type”and”C-type”. We strongly recommend that the customer select the refnet joint provided by the factory. If other brand’s refnet joint is selected, it may result in bad effects to the system.

McQuay®
Air Conditioning

REGISTERED
ISO 9002

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Details of specifications and equipment are also subject to change to suit local conditions and requirements and not all models are available in every market.